Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Section 73.622	)	RM No. _____
Of the Commission's Rules	)	
Digital Television Table of Allotments	)	MM Docket No. _____
(Thomasville, Georgia)	)	

To: The Chief, Allocations Branch

PETITION FOR RULEMAKING

WCTV Licensee Corp. ("WCTV"), a wholly-owned subsidiary of Gray Communications Systems, Inc., licensee of commercial television station WCTV-TV, NTSC Channel 6, Thomasville, Georgia, hereby respectfully petitions the Federal Communications Commission ("FCC" or "Commission") for rulemaking to modify the Commission's Digital Television Table of Allotments, as described in section 73.622 of the Commission's Rules.[1] Specifically, WCTV requests that the Commission substitute DTV Channel 46, in lieu of Channel 52, Thomasville, Georgia, as the digital television allotment to be used by the digital television station WCTV-DT, and to take any other steps necessary to enable WCTV to apply to construct and ultimately operate its facilities on Channel 46, as described in the attached Engineering Statement (the "Proposal").

[1] 47 C.F.R. § 73.622.

In a series of orders, the Commission has specified Channels 2-51 as digital television core spectrum (the "Core Spectrum").[2] Television stations may operate outside the Core Spectrum during the period in which such stations are transitioning to digital broadcasts (the "Transition Period"). After the Transition Period, however, television stations broadcasting on channels outside the Core Spectrum must surrender their licenses and commence digital broadcast operations on some channel within the Core Spectrum.[3] Accordingly, any station with a digital allotment outside the Core Spectrum, in most cases, would have to construct two digital facilities – one to be used on the non-core channel during the Transition Period, and one to be use on a core channel after the Transition Period.

In the *Reconsideration Order*, the Commission "recognize[d] the additional burden placed on licensees with out-of-core DTV allotments." [4] The Commission promised that "to the extent that in-core channels [are] available during the transition, [it] will attempt to further reduce the number of out-of-core allotments" through "future amendments to the Table."[5]

Adoption of this Proposal would enable the Commission to mitigate the burdens of the digital transition on WCTV. If the Commission adopts the Proposal, which would substitute a Core Spectrum digital allotment for WCTV-DT for the current, non-core

---

2 *In re* Advanced Television Systems, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*, 13 FCC Rcd 7418, paras. 42-46 (1998) ("*Reconsideration Order*"); *In re* Advanced Television Systems, *Sixth Report and Order*, 12 FCC Rcd 14588 (1997) ("*Sixth Report and Order*").

3 *See, e.g., Reconsideration Order*, paras. 55-58.

4 *Id.* at para. 55.

5 *Id.* at para. 56.

allotment, WCTV would need to design and construct only one set of digital transmission facilities.[6] Accordingly, the Proposal would reduce the construction costs WCTV will incur in making its digital transition, which would enable more of the station's limited funds to continue to be used to maintain and improve other aspects of its services and avoid technical, legal and equipment costs.

An Engineering Statement prepared by Cavell Mertz & Davis, Inc., attached as Exhibit 1 and incorporated by reference in this Petition, confirms that the proposed allotment change is consistent with the Commission's technical rules. Specifically, the analysis detailed interference studies demonstrates that the proposed allotment change would not result in inappropriate levels of interference to other DTV allotments or existing NTSC stations.[7]

WCTV hereby affirms that it will apply for the allotted channel if its Proposal is granted.

---

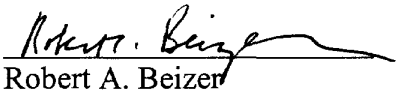
[6] While WCTV could revert to operation on Channel 6 following the transition, the potential for interference from nearby FM stations makes this option problematic.

[7] *See* 47 C.F.R. § 73.623; *see also Sixth Report and Order*, paras. 221-22.

For all the foregoing reasons, the Commission should adopt the Petition, approve the proposed modification in WCTV's channel allotment, and make all other changes necessary and appropriate to enable WCTV to apply to construct WCTV-DT's transmission facilities on Channel 46.

Respectfully submitted,

WCTV LICENSEE CORP.



Robert A. Beizer
Secretary

1201 New York Ave., NW
Suite 1000
Washington, D.C. 20005-3917
(202) 962-4820

August 16, 1999

ENGINEERING STATEMENT
prepared for
WCTV Licensee Corp.
WCTV-DT Thomasville, Georgia

This engineering statement has been prepared on behalf of *WCTV Licensee Corp. (WLC)*, in support of a *Petition for Rulemaking*. *WLC* is the licensee of WCTV (TV), Thomasville, Georgia. In of the Federal Communications Commission's Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders on *(SMO&O)* Advanced Television,[1] DTV Channel 52 was allotted as a "paired" channel for the WCTV analog Channel 6. An substitute DTV channel is proposed herein for WCTV-DT.

Discussion

The Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order *("MO&O")* in MM Docket 87-268[2] specified a core set of television channels for ultimate DTV use, thus permitting "recovery" of part of the existing television broadcast spectrum. The *MO&O* states that the core will consist of channels 2 through 51. The DTV table of allotments was prepared to minimize the use of channels 60 through 69 to facilitate early recovery of these channels. Further, allotments on channels 52 through 59 have been avoided where possible. Stations with DTV allotments on channels 52 through 69 will be required to change channels at the conclusion of the transition period. Accordingly, the *MO&O's* DTV allotments have been made on channels 2 through 51 wherever possible.

For the case at hand, DTV Channel 52 has been allotted for use by WCTV-DT. WCTV-DT's use of DTV Channel 52 would extend only through the transition period, following which *WLC* would be required to move the WCTV-DT facility to an as-yet undetermined channel within the core. At that time, WCTV-DT may be able to use its existing NTSC Channel 6 as its DTV channel. However, the potential for interference to or from nearby FM broadcasting facilities with respect to a DTV operation on Channel 6 is currently unknown. The possibility of reverting future DTV

---

[1]See MM Docket 87-268, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service,* FCC 98-315, released December 18, 1998.

[2]See FCC 97-115 *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, released February 23, 1998.

operations to the present NTSC Channel 6 is therefore questionable. Since *WLC* will in any event ultimately have to change the channel of its DTV facility following the transition period, a more "seamless" transition can be made if it can achieve assignment of an alternative DTV channel *within* the core now.

An engineering review of the DTV allotments and NTSC assignments in the region surrounding Thomasville showed that an alternate channel could be used for WCTV-DT. Detailed interference studies were conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission's Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, July 2, 1997 ("OET-69").[1] The studies showed that Channel 46 could be used for WCTV-DT at 1000 kW effective radiated power (ERP).

All stations considered in this study are listed in the attached **Table 1**. The results of the interference study, also summarized in **Table 1**, indicate that any additional interference to these stations meets the Commission's 2% / 10% interference limits regarding DTV proposals. Thus, this proposal is believed to be in compliance with the provisions of §73.623(c)(2) of the Commission's rules.

The ERP for the proposed Channel 46 substitution exceeds the 200 kW power cap for UHF DTV stations as established in the *MO&O*. However, the subsequent *SMO&O* does permit an

[1]The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein, except that the terrain profile step size is 0.1 km (which provides a finer resolution than the Commission's standard 1 km step size). A standard cell size of 2 km was used. The Longley-Rice computer program input data, following the guidelines established under OET-69, includes a location variability of 50%, a time availability of 10%, a situation variability of 50%, horizontal polarization, 0.005 S/m conductivity, a climate constant of 15, an assumption of a continental temperate climate zone, and a receive antenna height of 10 meters. The service area for each DTV facility under study is that area predicted to receive signal levels of at least 41 dBμ using the Longley-Rice methodology, and within the DTV F(50,90) service contour distance as determined per §73.625(b). In instances where the DTV reference ERP is 1,000 kW, the Grade B contour of the associated analog station is used to determine the extent of the DTV station's service area per §73.622(e)(1). The F(50,90) DTV service contour level is established by the formula 41 - 20log[615/(channel mid-frequency)] dBμ. The service area for each NTSC facility under study is that area predicted to receive signal levels of at least 64 dBμ using the Longley-Rice methodology, and within the NTSC F(50,50) service contour distance as determined per §73.684(c). The F(50,50) NTSC service contour level is established by the formula 64 - 20log[615/(channel mid-frequency)] dBμ. Comparisons of various results of this computer program to the Commission's implementation of OET-69 show good correlation.

increase in ERP above 200 kW, if supported by an additional interference analysis that assumes all other DTV facilities are operating at their assigned DTV power level, or 200 kW, whichever is greater. In this case, the allotted Channel 52 ERP is already 1000 kW, and the proposal is not an attempt at maximization. Therefore, it is believed that the "200 kW" additional interference studies are not necessary or required. For completeness, however, the results of additional "200 kW" studies are included as appropriate in **Table 1**. These results indicate that the channel change proposed herein would satisfy the Commission's existing requirements even under the more rigid "200 kW" analysis.

Althought the present WCTV Channel 52 DTV allotment has a maximum ERP of 1000 kW, due the Commission's procedure of limiting the maximum allotted ERP to 1000 kW (even when the paired NTSC Grade B contour is not fully replicated), the Channel 52 DTV facility as allotted does not achieve full replication for WCTV's analog Channel 6 facility. Substitution of the proposed Channel 46 at 1000 kW ERP also would not achieve full replication. However, the influence of the dipole factor correction in the determination of the DTV contour distance provides a slight extension of the DTV service area (i.e.: closer to the NTSC Grade B contour) and the goal of replication is more closely achieved.

The technical data for the proposed Channel 46 allotment is summarized below. The location and antenna height are the same as that for the current DTV Channel 52 allotment for WCTV-DT.

Summary Technical Data for Proposed DTV Channel 46 Substitution
Thomasville, Georgia

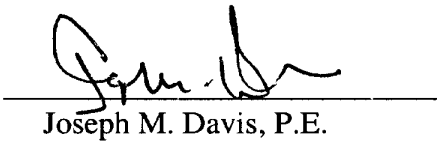
Coordinates (NAD-27)	30° 40' 13" N-Lat 83° 56' 26" W-Lon
Channel	46
Effective Radiated Power	1000 kW (non-directional)
Antenna Height	667 m AMSL 619 m HAAT

Summary

It is proposed that WCTV-DT Thomasville, Georgia be permitted to substitute DTV Channel 46 in lieu of the allotted DTV Channel 52. Better replication of the WCTV service area will be provided. Any interference caused to other DTV allotments or NTSC assignments meets the Commission's 2% / 10% *de minimis* limits. The use of DTV Channel 46 for WCTV-DT would not require *WLC* to later change channels, as is the case with the current Channel 52 allotment.

Certification

Under the penalty of perjury, the undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief. Mr. Davis is a principal in the firm of *Cavell, Mertz & Davis, Inc.*, is a Registered Professional Engineer in Virginia, holds a Bachelor of Science degree from Old Dominion University in Electrical Engineering Technology, and has submitted numerous engineering exhibits to various local governmental authorities and the Federal Communications Commission. His qualifications are a matter of record with that entity.



Joseph M. Davis, P.E.
August 6, 1999

Cavell, Mertz & Davis, Inc.
10300 Eaton Place Suite 200
Fairfax, VA 22030
(703) 591-0110

Table 1

INTERFERENCE ANALYSIS RESULTS SUMMARY

prepared for

WCTV Licensee Corp.

WCTV-DT Thomasville, Georgia

Stations Considered	City, State Channel, Type	Distance (km)	Baseline Population (1)	Initial Interference Percentage (2)	Additional Interference Percentage (3)	Proposed Change in Interference Population (4)	Proposed Change in Interference Percentage (5)	Final Interference Percentage (6)
WFXL (TV) (Lic)	Albany, GA 31 NTSC	73.6	402,201	0.5	0.0	150	0.0	0.5
WGVP (TV) (Lic)	Valdosta, GA 44 NTSC	78.2	309,034	0.4	0.0	2,692	0.9	1.3
WGVP (TV) (CP)	Valdosta, GA 44 NTSC	78.2	232,388	0.4	0.0	721	0.3	0.7
WPCT (TV) (CP)	Panama City Beach, FL 46 NTSC	184.6	------ No interference predicted from proposal -----					
WVAN-DT (Ref 958.3 kW)	Savannah, GA 46 DTV	274.9	641,000	0.0	0.0	2,386	0.4	0.4
WMCF-DT (Ref 50 kW)	Montgomery, AL 46 DTV	287.8	366,000	0.0	0.0	475	0.1	0.1

Table 1
INTERFERENCE ANALYSIS RESULTS SUMMARY
(page 2 of 3)

Stations Considered	City, State Channel, Type	Distance (km)	Baseline Population (1)	Initial Interference Percentage (2)	Additional Interference Percentage (3)	Proposed Change in Interference Population (4)	Proposed Change in Interference Percentage (5)	Final Interference Percentage (6)
WMCF-DT (200 kW)	Montgomery, AL 46 DTV	287.8	366,000	0.0	0.0	4,653	1.3	1.3
WLCB-DT (Ref 133.0 kW)	Leesburg, FL 46 DTV	290.1	------ No interference predicted from proposal -----					
WLCB-DT (200 kW)	Leesburg, FL 46 DTV	290.1	1,425,000	0.0	0.0	512	0.0	0.0
WGNX (TV) (Lic)	Atlanta, GA 46 NTSC	349.9	3,100,046	0.1	0.0	430	0.0	0.0
WPCT-DT (Ref 50.0 kW)	Panama City Beach, FL 47 DTV	184.6	------ No interference predicted from proposal -----					
WPCT-DT (200 kW)	Panama City Beach, FL 47 DTV	184.6	------ No interference predicted from proposal -----					
WTVM-DT (Ref 985.2 kW)	Columbus, GA 47 DTV	199.9	------ No interference predicted from proposal -----					

Table 1

INTERFERENCE ANALYSIS RESULTS SUMMARY

Stations Considered	City, State Channel, Type	Distance (km)	Baseline Population (1)	Initial Interference Percentage (2)	Additional Interference Percentage (3)	Proposed Change in Interference Population (4)	Proposed Change in Interference Percentage (5)	Final Interference Percentage (6)
WTLH (TV) (Lic)	Bainbridge, GA 49 NTSC	39.3	352,831	0.0	0.0	2	0.0	0.0
WTLH (TV) (CP)	Bainbridge, GA 49 NTSC	3.3	------ No interference predicted from proposal -----					

Notes:

(1) For DTV stations, greater of NTSC or DTV Service Population, from FCC Table
For NTSC stations, total population within noise-limited contour

(2) For DTV stations, 100 percent minus FCC Table initial DTV/NTSC population match
For NTSC stations, initial percent loss: percent of population within (1) predicted to receive DTV only interference from FCC Table

(3) Additional interference experienced due to DTV facilities authorized subsequent to initial allotment table

(4) Net change in population receiving interference resulting from proposal

(5) Proposal's impact in terms of percentage, equals (4)/(1) times 100 percent: not to exceed *de minimis* limit of 2.0 percent

(6) Total interference: equals (2) + (3) + (5); proposal may not increase (2) +(3) above 10 percent

The determination of stations for consideration and the determination of baseline population and interference percentages were made as described in the Commission's August 10, 1998 Public Notice *"Additional Application Processing Guidelines for Digital Television"*